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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,409	01/18/2005	Paul Soenen	016782-0321	7024

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EXAMINER	
HURLEY, SHAUN R	
ART UNIT	PAPER NUMBER
3765	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,409	SOENEN ET AL.	
	Examiner	Art Unit	
	Shaun R. Hurley	3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19-21 and 23-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 19-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8, 9, 14, 15, 17, and 19, 26, 28, 29, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Shurman (5009902).

Shurman teaches a metal strand for use in tires (abstract) comprising at least two metal filaments (side by side), at least one being interrupted providing one filament end in an interruption zone, wherein the filament end is fixed to the uninterrupted filaments of the strand using polymer adhesive acting as a glue, or soldering (Column 5, lines 46-50). The fixing agent inherently providing at least 50% of the properties afforded by the metal strand. Shurman also teaches the filament end be tapered to create a diameter being essentially equal to the strand diameter. In regards to the filament end having fixing substance thereon, the rubber of the tire would most certainly be present.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, 7, 16, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shurman in view of Bales et al (6313409).

Shurman essentially teaches the invention as discussed above, but fails to specifically teach soldering at a temperature below 700°C with Ag, Sn, or Ag-Sn alloys, which Bales teaches as well known with steel filaments (Column 5, lines 1-18). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have utilized such soldering materials, so as to ensure a proper adhesion point between the two filaments in a manner well known in the art and readily available. The ordinarily skilled artisan would have understood and appreciated the benefits of such a bonding, and known to do such. Bales likewise teaches core/sheath construction, which provides additional tensile strength. In regards to steel filaments, Shurman teaches that such is well known in the art (background) and would have known to use such, to create a strong strand for prolonged use.

5. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shurman in view of Takahira (6321810).

Shurman essentially teaches the invention as discussed above, but fails to specifically teach a strand diameter less than 2.5 mm and a filament diameter less than 0.35 mm, both of which Takahira teaches (Column 1, lines 41-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used such diameters in the structure of Shurman, so as to provide increased bending ability while enabling proper strength. Smaller diameters bend easier, and the ordinarily skilled artisan would have appreciated these benefits and known to use such in his structure.

6. Claims 21 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shurman in view of Bruyneel et al (5784874).

Shurman essentially teaches the invention as discussed above, but fails to specifically teach the use of a metal cord in a rubber timing belt, which Bruyneel teaches (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the cord in a timing belt as taught, so as to create a structure of increased strength. Timing belts are well known, and the ordinarily skilled artisan would have appreciated the benefits provided and known to use the cord, so as to provide necessary strength to the belt structure.

7. Claims 20, 23-25, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shurman in view of Coleman et al (4724929)

Shurman essentially teaches the invention as discussed above, but fails to specifically teach the use of a metal cord in an elevator belt capable of hoisting, controlling, and suspending, which Coleman teaches (Abstract, Figure 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the cord in an elevator belt as taught, so as to create a structure of increased strength. Elevator belts are well known, and the ordinarily skilled artisan would have appreciated the benefits provided and known to use the cord, so as to provide necessary strength to the belt structure.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined

application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 5-17, and 19-33 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/514420. Although the conflicting claims are not identical, they are not patentably distinct from each other because each teaches a metal cord having at least one strand welded with minimum strength requirements.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Argument

10. Applicant's arguments filed 15 June 2006 have been fully considered but they are not persuasive.

Applicant argues that Shurman fails to teach the structure as claimed, to which Examiner respectfully disagrees. The third embodiment specifically teaches two coiled filaments adhered to one another. It is Examiner's opinion that the end most certainly is fixed to the uninterrupted

filament by its structure being fixed. However, beyond this, when placed in the rubber of the tire, the first filament will be adhered to the second filament directly.

In regards to Applicant's request to provide prior art for the myriad of uses for his cord, as well as, well known soldering materials, Examiner has obliged and made the rejections as previously indicated.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaun R. Hurley whose telephone number is (571) 272-4986. The examiner can normally be reached on Mon - Fri, 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on (571) 272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shaun R Hurley
Primary Examiner
Art Unit 3765

SRH
19 March 2007